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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,956	03/23/2004	Byung-Jin Choi	PA128/UTS-47-01D09	2332

7590 10/21/2004

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EXAMINER
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DOUGHERTY, THOMAS M

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/806,956	CHOI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thomas M. Dougherty	2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The independent claims note both a "subset" of "said plurality of axes" and some further note a "subgroup" of this "subset" of axes. These terms themselves, "subset" and "subgroup" are only noted in the Summary of the Invention and in the claims, they are not discussed in the disclosure at all. What constitutes a "subset" and a "subgroup" is not known. It is understood that these refer to allowed movement, but how, structurally, this is achieved is not described. That is to say, it appears that some motions are allowed and others are not. Those allowed are perhaps outside of the subset axes while those not allowed or perhaps not possible to generate, constitute the subset axes. The terms subset and subgroup seem to be simply arbitrary terms that describe axes which the invention either is prevented from defining or having or incapable of defining or having.

Claims 23, 34 and 37-43, additionally note "a mount" which has no proper antecedent basis in the disclosure and is not referenced by a number in any of the figures.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16-22, 27-33, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ubhayakar (US 4,848,179). Ubhayakar shows (figs. 2, 3, 13) an apparatus to control displacement of a body (e.g. 56) spaced-apart from a surface (3), said apparatus comprising: a flexure system having first flexure (e.g. 5a) and a second flexure (e.g. any of 5b-5k) members; a body (56); and an actuation system (13) coupled to said flexure system with said body being coupled to said flexure system to move with respect to a plurality of axes (col. 6, ll. 61-67) with said actuation system being configured to selectively constrain movement of said body along a subset of said plurality of axes (col. 5, l. 64 to col. 2, l. 2). Note that this last feature is regarded as a goal of the invention since the applicants note no structure to accomplish said selective constraint of movement.

As best understood, said actuation system provides resistance to movement of said body (col. 5, l. 64 to col. 2, l. 2) with respect to said subset, while allowing relatively free movement with respect to axes outside of said subset.

As best understood, the subset is coplanar with said body.

As best understood, the subset of axes includes two orthogonal axes.

As best understood, said actuation system provides resistance to translational displacement of said body with respect to a subgroup of said subset of axes, while

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allowing relatively free translational displacement with respect to axes outside of said subset, and resistance to rotational displacement of said body with respect to a sub-portion of said subgroup, while allowing relatively free rotational displacement of said body with respect to axes outside of said sub-portion. Note again, as Ubhayakar notes the claimed structure, this feature is regarded as being met by him.

As best understood, the subset of axes includes two substantially orthogonal axes and said subgroup includes an additional axis extending substantially orthogonally to said two orthogonal axes.

As best understood, said subgroup extends normal to a surface of said body.

Said actuation system further includes a plurality of actuators (13) to control displacement of said body (56).

Ubhayakar shows (figs. 2, 3, 13) an apparatus to control displacement of a body (56) spaced-apart from a surface (3), said apparatus comprising: a flexure system (e.g. fig. 5a); a body (56); and an actuation system (13) coupled to said flexure system with said body (56) being coupled to said flexure system to move with respect to a plurality of axes (col. II. 61-67) with said actuation system being configured to selectively constrain translational displacement of said body (56) with respect to a subset of said plurality of axes and to constrain rotational displacement of said body (56) with respect to a subgroup of said plurality of axes, as that is best understood.

As best understood, each of the axes associated with said subset differs from each of the axes associated with said subgroup.

As best understood, the actuation system provides resistance to translational

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displacement (col. 5, l. 64 to col. 6, l. 2) said body (56) with respect to said subset, while allowing relatively free translational displacement with respect to axes outside of said subset, and resistance to rotational displacement of said body with respect to a sub-portion of said subgroup, while allowing relatively free rotational displacement of said body with respect to axes outside of said sub-portion.

As best understood, the axes of said subset are coplanar with said body.

As best understood, the subset of axes includes two substantially orthogonal axes.

As best understood, the subset of axes includes two substantially orthogonal axes and said subgroup includes an additional axis extending substantially orthogonally to said two substantially orthogonal axes.

As best understood, said subgroup extends normal to a surface of said body.

***Allowable Subject Matter***

Claim 24-26, 35, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not show nor fairly suggest the flexure system connected to a flexure ring and further including a force sensor and a base plate. The prior art does not show first and second flexure members coupled together to defined a flexure system having eight joints which are spaced-apart from a pivot point defined by the intersection of said first and said second axis.

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**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining prior art cited reads on at least some aspects of the claimed invention.

Note that claims 23, 34 and 37-43 are so indefinite that a consideration of their relationship to the prior art cannot be made at this time. When they are made definite, such a consideration may be made.

Direct inquiry to Examiner Dougherty at (571) 272-2022.

*tmd*  
tmd

October 18, 2004

*Thomas M. Dougherty*  
THOMAS M. DOUGHERTY  
PRIMARY EXAMINER  
GROUP 2834